

## **IN THE CLAIMS**

This listing of claims replaces all prior versions, and listings, in this application.

1. (previously presented) A method for determining whether an individual, which is a mammal or bird, is experiencing changed physiological status arising from exposure to a psychological stressor, the method comprising:

- (a) contacting a test whole blood sample comprising neutrophils obtained from said individual with an inducer capable of stimulating superoxide production in neutrophils, under conditions suitable for such stimulation;
- (b) determining superoxide production above basal in said test sample after a time period at which neutrophils of the same species in a control whole blood sample, which are free or substantially free of stress-induced activation or at least derived from one or more individuals exposed to the same regime minus a factor to be tested as a psychological stressor, will exhibit superoxide production under the same *in vitro* conditions; and
- (c) comparing superoxide production above basal observed in said test whole blood sample with superoxide production above basal observed in a control whole blood sample as defined in (b) above under the same conditions;

wherein lower superoxide production in said test whole blood sample compared to said control whole blood sample is indicative of exposure of said individual to at least one psychological stressor and, where such exposure is indicated, the degree of further *in vitro* induced superoxide production in said test sample above basal is a measure of coping capacity for said exposure.

2. (previously presented) A method according to claim 1 for determining the coping capacity of an individual for exposure to a psychological stressor, wherein prior to step (a) said individual is exposed to said psychological stressor for a time period whereby neutrophils in an individual of the same species who is susceptible to stress induced by said stressor will exhibit increased superoxide production, and

wherein in step (c) lower superoxide production in said test whole blood sample compared to said control whole blood sample is indicative of exposure of said individual to said psychological stressor and the degree of further *in vitro* induced superoxide production in said test whole blood sample above basal determined in step (c) is a measure of coping capacity of said individual for said exposure.

Claims 3-4 (canceled)

5. (previously presented) A method according to claim 1, wherein the individual is human.

6. (previously presented) A method according to claim 1, wherein the individual is a bird.

7. (previously presented) A method according to claim 1, wherein the individual is a farmed animal.

8. (previously presented) A method according to claim 1, wherein the individual is a wild mammal.

9. (previously presented) A method according to claim 1, wherein the inducer capable of stimulating superoxide production in neutrophils is phorbol myristate acetate (PMA), N-Formyl-Met-Leu-Phe (fLMP chemotactic peptide), zymosan, lipopolysaccharide or adrenaline.

10. (previously presented) A method according to claim 1, wherein superoxide production is detected using luminol or isoluminol as an amplifier and the resulting chemiluminescence is measured.

11. (previously presented) A method according to claim 1, wherein the inducer capable of stimulating superoxide production in neutrophils is phorbol myristate acetate (PMA),

superoxide production is detected using luminol as an amplifier and the resulting chemiluminescence is measured.

12. (original) A method of screening for a stress-relieving drug, the method comprising:

- (a) administering a test compound to an individual;
- (b) exposing said individual to a psychological stressor and measuring their coping capacity using a method according to claim 2; and
- (c) comparing their coping capacity after administration of the test compound to their coping capacity in the absence of the test compound, wherein an increase in coping capacity after administration of the test compound is indicative of stress-relieving ability of said test compound.

13. (original) A method according to claim 12, wherein the individual is a non-human mammal.

14. (previously presented) A method according to claim 12, further comprising synthesizing a stress-relieving drug identified by said method, and/or formulating the drug into a pharmaceutical composition.

Claim 15 (canceled)

16. (previously presented) A method of treating an individual suffering from stress which comprises providing a stress-relieving treatment, such as administering a stress-relieving drug, to an individual identified as suffering from stress using a method according to claim 1.

17. (previously presented) A method of testing the efficacy of a proposed stress-relieving treatment which comprises exposing an individual to a psychological stressor in the presence and absence of said treatment and determining their coping capacity in accordance with claim 2.

Claims 18-22 (canceled)

23. (previously presented) A method according to claim 6, wherein the bird is a chicken.

24. (previously presented) A method according to claim 7, wherein the farmed animal is a cow, pig, sheep, lamb or poultry.